

Name: \_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

### Exponents Practice #3

**Part One:** Simplify each expression as completely as possible (no negative exponents or exponents or coefficients of one!).

1. $x^3y^6x^2y$	2. $(12xyz)^0$	3. $\frac{h^4}{v^{-9}}$
4. $(10a^4b^3c^{10})(2a^5bc)$	5. $(8rs)(8rs)$	6. $(a)(a)(a)$
7. $(6a^5bc^{-3})(9a^{-5}b^6c^5)$	8. $(5b)^{-1}$	9. $(x^4y^{-4}z^4)^0$
10. $(7x)(2x)$	11. $14^814^{-10}14^{-4}$	12. $10^{10}10^{-2}10^{-8}$
13. $(-3x^4y^{-2})(2x^{-9}y^2)$	14. $6^{-2}x^0$	15. $2^{19}2^{-3}2^02^3$
16. $(8q^4r^{-5}s^{-8})(-q^{-9}r^{-1}s)$	17. $\frac{5s^4t^{-5}r^{-12}}{15s^{-12}t^4r^8}$	18. $-y^2(-y^{-9})$

19. $4^{-3}e^{15}f^3e^{-12}f^{-6}(2)$	20. $-xyz(-xyz)$	21. $x^0(4y^{-1})$
22. $\frac{-20x^{-5}y^{-9}z^{12}}{5xy^3z^{-10}}$	23. $(3xy)(-3xy)$	24. $\frac{1}{-5x^{-3}yz^{-12}}$

**Part Two: Algebraic Sentences:** Answer each question in complete sentences using algebraic terms. Echo the prompt.

25. Zero to the index of negative five is undefined. Explain why this is true. (Think about how you would simplify that expression and why that would not work.)

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26. Gavin states that the product of seven and x to the negative fifth index is equivalent to seven divided by x to the fifth index. Do you agree with his statement? Explain your reasoning.

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